

**Notice of Allowability**

Application No.

10/034,951

Applicant(s)

GATHERER ET AL.

Examiner

Art Unit

Jaison Joseph

2634

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed on 12/27/2001.
2. ☒ The allowed claim(s) is/are 1-24.
3. ☒ The drawings filed on 27 December 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Dennis Moore on 03/16/2005.

The application has been amended as follows:

Claim 2 rewrite as: The method of claim 1, wherein the forming step comprises: performing an Inverse Discrete Fourier Transform (IDFT) on each of the payload and current trial clip prevention signal, each signal modified by a filter response for the current phase; and adding the IDFT's from the performing step to produce the sum signal.

Claim 6 rewrite as: The method of claim 1, wherein the forming step comprises: performing an Inverse Discrete Fourier Transform (IDFT) on the payload signal; applying a filter response for the current phase to the IDFT of the payload signal; adding the trial clip prevention signal, in a time domain form and after applying the filter response for the current phase thereto, to the payload signal after the applying step.

Claim 11 rewrite as: The transceiver of claim 10, wherein the programmable logic is programmed to perform the forming step by: performing an Inverse Discrete Fourier Transform (IDFT) on each of the payload and current trial clip prevention signal, each

signal modified by a filter response for the current phase; and adding the IDFT's from the performing step to produce the sum signal.

Claim 14 rewrite as: The transceiver of claim 10, wherein the programmable logic is programmed to perform the forming step by: performing an Inverse Discrete Fourier Transform (IDFT) on the payload signal; applying a filter response for the current phase to the IDFT of the payload signal; adding the trial clip prevention signal, in a time domain form and after applying the filter response for the current phase thereto, to the payload signal after the applying step.

***Allowable Subject Matter***

Claims 1 – 24 are allowed.

The following is an examiner's statement of reasons for allowance: Prior art of record failed to teach method of modulating digital signals comprising bit loading of a plurality of sub channels, identifying at least one of the plurality of sub channels that is unloaded, receiving a payload bit stream, encoding the received payload bit stream into a plurality of symbols, the symbols each associated with one of the plurality of sub channels, the plurality of symbols arranged as a digital payload signal. For each of a plurality of phases corresponding to an up-sampling function, forming a time-domain sum signal of the payload signal and trial clip prevention signal, the trial clip signal is being orthogonal to the payload signal and associated with the at least one unloaded sub channel, and the trial clip prevention and payload signals having been filtered by a filter associated with current phase.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison Joseph whose telephone number is (571) 272-6041. The examiner can normally be reached on M-F 8:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jaison Joseph  
03/16/2005

  
**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**